REMARKS

Claims 21 to 29 have been added, and claims 11 to 29 are therefore pending in this application.

In view of the following, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Claims 11, 15, 16, 17, 18, 19, and 20 were objected to for use of the term "specified." Applicants do not agree with the objection, but to facilitate matters have amended the claims to render the objection moot. Applicants respectfully request the objection be withdrawn.

Claims 11 and 19 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,236,214 ("Camp").

As regards the anticipation rejections of the claim, to reject a claim under 35 U.S.C. § 102, the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (See *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). As explained herein, it is respectfully submitted that the prior Office Action does not meet this standard, for example, as to all of the features of the claims. Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed subject matter. (See *Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)).

As further regards the anticipation rejection, to the extent that the Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; and see *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int'f. 1990)). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic.

While the rejections may not be agreed with, to facilitate matters, claim 11, as presented, is to a device for ascertaining an amount of charge that is able to be drawn from an energy storage unit, up to at least one cutoff threshold, including: *a charge predictor for*

calculating the amount of charge that is able to be drawn from the energy storage unit, up to the at least one cutoff threshold, wherein the calculated amount of charge is based on the product of a time value and a measured or a predetermined discharge current, and wherein the time value is based on an amount of time before the at least one cutoff threshold is met; and an estimator for ascertaining at least one state variable based on at least one operating performance quantity of the energy storage unit, in which the charge predictor includes a mathematical energy storage model that receives the at least one state variable as input and provides an estimate of a variable value as a function of time, and in which the time value is an estimated point in time when the variable value meets or exceeds the at least one cutoff threshold.

The Camp reference generally refers, for example, to a microprocessor that estimates the capacity present in the battery and determines the remaining amount of battery capacity. (Camp, Abstract). It states that the "total amount of removed capacity in the battery is subtracted from the estimated capacity contained in the battery." (Camp at col. 6, lines 65 to 68). In other words, the Camp reference refers to measuring "the total amount of discharge for the battery," and subtracting this for an estimate of the total capacity of the battery. (Camp at col. 2, lines 36 to 38). The Camp reference further refers to "measuring a temperature of the battery" and the number of battery charging cycles. Using these parameters, a capacity value corresponding to at least one of the parameters is computed based on stored database information. (Camp at col. 2, lines 29 to 35).

The Camp system is fundamentally different than the presently claimed subject matter, as presented. For example, Camp does not identically disclose (or suggest) the feature in which "the determined amount of charge is based on *the product* of a *time value* and a measured or a predetermined *discharge current*." The Camp reference determines an amount of remaining charge based on *the difference* between an estimated capacity and a known total discharge quantity, *but it does **not** use a time value in arriving at the determination*. Rather, it converts the determination into a "remaining talk time" number for presentation to the user.

The Camp reference also does not identically disclose (or suggest) the feature in which "the charge predictor includes a mathematical energy storage model that receives the at least one state variable as input and provides an estimate of a variable *value for any given point in time*", as provided for in the context of the presently claimed subject matter. The

Camp reference uses a stored model and parameter inputs to yield an estimated *capacity* for any given value of some other variable (e.g., number of charge/discharge cycles). The cited paragraph at col. 4, lines 54 to 64, specifically states that:

> After the temperature, voltage, current and cycle readings are taken, a corresponding battery capacity is interpolated by determining the corresponding values from FIGS. 3 and 4. Preferably, the data from the plots are contained in a database of information stored in memory for rapid retrieval by the logic implementing the present embodiment. For example, the capacity in the battery 12 may be estimated by determining a battery capacity value corresponding to a point on a capacity curve, wherein the curve takes into account the battery temperature and charge/discharge cycles a shown in FIGS. 3 and 4.

This is fundamentally different since "the time value [of claim 11] is an estimated point in time when the variable value meets or exceeds the at least one cutoff threshold." The method outlined by Camp provides no more than the present background information.

In particular, the Camp method uses the difference in an estimation of capacity with a *total* measured discharge to estimate the remaining capacity. The present claims, however, estimate a variable within the system. More specifically, through a model of the variable as a function of time, the present claims estimate when a variable will reach some threshold and then use that timeframe (with the discharge current value) to estimate a remaining charge (a discharge current value is not the same as a total quantity of discharged current, as in Camp). An advantage of this is that there is no need to measure and retain the total energy already discharged. The device of claim 11, as presented, uses presently occurring or real-time values, which may be applied to any system without knowledge of that system's total prior discharge.

Accordingly, claim 11, as presented, is allowable, as are its dependent claims 12 to 18.

Claim 19 includes features analogous to those of claim 11, as presented, and it is therefore allowable for at least the same reasons, as is its dependent claim 20.

New claims 21 to 29 do not add new matter and are supported by the present application, including the specification. Claim 21 includes features like those of claims 11 and 19 and are therefore allowable for essentially the same reasons, as are its dependent claims 22 to 29.

CONCLUSION

It is therefore respectfully submitted that all of the presently pending claims are allowable. It is therefore respectfully requested that the rejections and objections be withdrawn, since all issues raised have been addressed and obviated. An early and favorable action on the merits is therefore respectfully requested.

Respectfully submitted,

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